



KEYSTONE

High Efficiency Gas Boilers and Water Heaters

- Stainless Steel Heat Exchanger
- ASME Stamped Heat Exchanger
- Thermal Efficiencies of up to 97%
- Turndown Ratios up to 10:1
- Compact Footprint
- 7 Boiler Models from 399 to 1,200 MBH
- 9 Water Heater Models from 199 to 1,200 MBH
- Boilers 500 MBH and greater are CSD-1 Compliant
- PVC, PP, and SS Venting up to 100'
- Low NOx – 2012 SCAQMD Certified
- 1 Year Limited Warranty
- 5 Year Limited Heat Exchanger Warranty (KW Models)
- 10 Year Limited Heat Exchanger Warranty (KS Models)



Featuring Color Touch Screen Display



- Large Color Touch Screen Display
- Cascade up to 8 Units for a Capacity of 4,800 MBH
- Modbus Protocol Included for BAS Integration
- Indirect Water Heater Priority
- Outdoor Reset



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Keystone

Performance Specifications

Water Heater Model	Fuel	Input MBH	Thermal Efficiency %	Output MBH	Turndown Ratio
KW 199 T	Natural Propane	40 - 199	97	193	5 : 1
KW 285 T	Natural Propane	57 - 285	95	271	5 : 1
KW 399 T	Natural Propane	80 - 399	96	383	5 : 1
KW 500 T	Natural Propane	100 - 500	96	480	5 : 1
KW 600 T	Natural Propane	120 - 600	97	582	5 : 1
KW 750 T	Natural Propane	150 - 750	94	705	5 : 1
KW 850 T	Natural Propane	170 - 850	96	816	5 : 1
KW 1000 T	Natural Propane	100-1,000	95	950	10 : 1
KW 1200 T	Natural Propane	120 - 1,200	95	1140	10 : 1

Boiler Model	Fuel	Input MBH	Thermal Efficiency %	Combustion Efficiency %	DOE Heating Capacity	Turndown Ratio	Net AHRI Rating MBH
KS 399 T	Natural Propane	80 - 399	96.5	96.5	386	5 : 1	336
KS 500 T	Natural Propane	100 - 500	95.0	95.0	475	5 : 1	413
KS 600 T	Natural Propane	120 - 600	95.3	96.0	572	5 : 1	497
KS 750 T	Natural Propane	150 - 750	96.6	96.6	724	5 : 1	630
KS 850 T	Natural Propane	170 - 850	95.7	95.7	813	5 : 1	707
KS 1000 T	Natural Propane	100 - 1,000	94.2	94.2	942	10 : 1	819
KS 1200 T	Natural Propane	120 - 1,200	95.1	94.8	1120	10 : 1	974

Connections/Dimensions/Data

Water Heater Model	Supply/Return Connections	Gas Connections	Air Inlet Diameter	Vent Diameter	Dimensions D x W x H	Weight Lbs
KW 199 T	1 - 1/4"	1/2"	3"	3"	27" x 25" x 38"	270
KW 285 T	2"	3/4"	4"	4"	27" x 25" x 38"	299
KW 399 T	2"	3/4"	4"	4"	32" x 25" x 38"	364
KW 500 T	2"	1"	4"	4"	38" x 25" x 38"	419
KW 600 T	2"	1"	4"	4"	38" x 25" x 38"	426
KW 750 T	2"	1 - 1/2"	4"	6"	51" x 25" x 38"	481
KW 850 T	2"	1 - 1/2"	4"	6"	55" x 25" x 38"	503
KW 1000 T	2"	1 - 1/2"	6"	6"	53" x 27" x 49"	620
KW 1200 T	2"	1 - 1/2"	6"	6"	53" x 27" x 49"	620

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Standard Features

Heat Exchanger

- Modulation down to 10% of full fire (10:1 Turndown)
- Full fire efficiencies as high as 97%
- Stainless steel heat exchanger with welded construction
- ASME "H" stamp
- 5 year limited warranty (KW Models)
- 10 year limited warranty (KS Models)

Burner

- Sealed combustion chamber
- Pre-mix stainless steel burner
- Burner sight glass
- Direct spark ignition system
- Low NOx system exceeds the most stringent regulations for air quality – 10 ppm NOx

Sensors

- Water flow switch (KW 399, 500, 1000, & 1200 only)
- Vent temperature cutoff
- Temperature & pressure gauge
- Indirect water heater priority with sensor

Intake and Venting

- Horizontal or vertical direct vent
- Vent and air pipe lengths of up to 100 equivalent feet (each)
- PVC, Polypropylene, or Stainless Steel venting

Control

- Large color touch screen
- Electronic PID modulating control stages up to eight boilers
- On/Off toggle switch Alarm output
- Accepts (4-20mA or 0-10V) modulation control
- Manual reset high limit
- Multiple pump control for boiler pump, system pump, and indirect domestic water pump, each with delay

Construction

- Zero clearance to combustibles
- 160 psi maximum working pressure
- 75 psi (517 kPa) ASME rated pressure relief valve (KS Models)
- 125 psi (861 kPa) ASME rated pressure relief valve (KW Models)
- Indoor/Outdoor Installations (1000 & 1200 only)
- Drain valve

Piping Connections

- Connections on top of unit (199 – 850)
- Piping and Wiring from back of unit (1000 & 1200)
- Built-in condensate trap

Triangle Tube reserves the right to make product changes or improvements at any time without notice.



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